CLAIMS

What is claimed is:

1. A method for determining a service interval for a device comprising:

collecting one or more data points regarding a device;

comparing the one or more data points to at least one associated reliability curve for a population of similar devices; and

calculating a service interval for the device based at least upon the comparison of the one or more data points and the reliability curve.

2. The method of claim 1, wherein the device comprises medical equipment.

3. The method of claim 2, wherein the medical equipment comprises a patient monitor.

4. The method of claim 2, wherein the medical equipment comprises a diagnostic imaging system.

5. The method of claim 1, wherein the device is a component of a complex machine.

6. The method of claim 1, wherein calculating the service interval comprises evaluating data collected from at least one of:

a run time meter;

a cycle counter;

a continuous system monitor; and
a self-test monitor.

7. The method of claim 1, wherein at least one reliability curve is derived from a database of repair records for a population of similar devices.

8. The method of claim 1, wherein calculating a service interval is dependent upon at least one of:
the age of the device;
the repair history the device;
the workflow associated with the location of the device;
the traffic level associated with the location of the device;
the criticality associated with the device; and
the environment in which the device operates.

9. The method of claim 1, wherein the one or more data points comprise operational data.

10. The method of claim 1, wherein the one or more data points comprise non-operational data.

11. A method for selecting a service interval from a plurality of service intervals, comprising:

collecting one or more data points regarding a device from a plurality of data sources;

calculating a service interval for each data source by at least comparing the one or more data points from the data sources and at least one associated reliability curve; and

selecting an optimal service interval from the plurality of service intervals.

12. The method of claim 11, wherein the device comprises medical equipment.

13. The method of claim 11, wherein the one or more data points are collected from at least one of:

a run time meter;
a cycle counter;
a continuous system monitor; and
a self-test monitor.

14. The method of claim 11, wherein at least one reliability curve is derived from one or more repair records for a population of similar devices.

15. The method of claim 11, wherein calculating a service interval is dependent upon at least one of:

the age of the device;
the repair history of the device;
the workflow associated with the location of the device;
the traffic level associated with the location of the device;
the criticality associated with the device; and
the environment in which the device is operated.

16. The method of claim 11, wherein the one or more data points comprise operational data.

17. The method of claim 11, wherein the one or more data points comprise non-operational data.

18. A method for determining service intervals for a plurality of devices comprising:

collecting one or more data points regarding a plurality of devices;

calculating a service interval for each device by at least comparing the one or more data points associated with the device and at least one associated reliability curve; and

selecting an optimal service interval for one or more of the devices from the plurality of service intervals.

19. The method of claim 18, wherein at least one of the devices comprises medical equipment.

20. The method of claim 18, wherein at least one of the devices is a component of a complex machine.

21. The method of claim 18, wherein selecting an optimal service interval comprises comparing the service intervals of each device.

22. The method of claim 18, wherein calculating a service interval comprises evaluating data collected from at least one of:

a run time meter;
a cycle counter;
a continuous system monitor; and
a self-test monitor.

23. The method of claim 18, wherein calculating a service interval is dependent upon at least one of:

the age of a device;
the repair history of a device;
the workflow associated with the location of the device;
the traffic level associated with the location of the device;
the criticality associated with the device; and
the environment in which a device operates.

24. The method of claim 18, wherein the one or more data points comprise operational data.

25. The method of claim 18, wherein the one or more data points comprise non-operational data.

26. A system for determining a service interval for a device comprising:

a computer; and

a device connected to the computer through a network and configured to collect one or more data points regarding a device, compare the one or more data points to at least one associated reliability curve for a population of similar devices, and calculate a service interval for the device based at least upon the comparison of the one or more data points and the reliability curve.

27. The system of claim 26, further comprising at least one of:
a run time meter;
a cycle counter;
a continuous system monitor; and
a self-test monitor.

28. The system of claim 26, wherein the computer and the device are networked to a server.

29. The system of claim 28, wherein the server contains reliability data for a population of similar devices.

30. A system for determining a service interval from a plurality of service intervals comprising:

a computer; and

a device connected to the computer through a network and configured to collect one or more data points regarding a device from a plurality of data sources, calculate a service interval for each data source by at least comparing the one or more data points from the data sources and at least one associated reliability curve, and select an optimal service interval from the plurality of service intervals.

31. The system of claim 30, further comprising at least one of:
a run time meter;

a cycle counter;
a continuous system monitor; and
a self-test monitor.

32. The system of claim 30, wherein the computer and the device are networked to a server.

33. The system of claim 32, wherein the server contains reliability data for a population of similar devices.

34. A system for determining service intervals for a plurality of devices comprising:

a computer; and

a plurality of devices connected to the computer through a network and configured to collect one or more data points regarding a plurality of devices, calculate a service interval for each device by at least comparing the one or more data points associated with the device and at least one associated reliability curve, and select an optimal service interval for one or more of the devices from the plurality of service intervals.

35. The system of claim 34, further comprising at least one of:
a run time meter;
a cycle counter;
a continuous system monitor; and
a self-test monitor.

36. The system of claim 34, wherein the computer and the devices are networked to a server.

37. The system of claim 36, wherein the server contains reliability data for populations of similar devices.

38. A system for determining a service interval for a device comprising:

means for collecting one or more data points regarding a device;

means for comparing the one or more data points to at least one associated reliability curve for a population of similar devices; and

means for calculating a service interval for the device based at least upon the comparison of the one or more data points and the reliability curve.

39. A system for determining a service interval from a plurality of service intervals comprising:

means for collecting one or more data points regarding a device from a plurality of data sources;

means for calculating a service interval for each data source by at least comparing the one or more data points from the data sources and at least one associated reliability curve; and

means for selecting an optimal service interval from the plurality of service intervals.

40. A computer program for determining a service interval for a device comprising:

a computer readable medium configured to store machine executable code; and a computer program stored on the medium, the program comprising executable routines for collecting one or more data points regarding a device, comparing the one or more data points to at least one associated reliability curve for a population of similar devices, and calculating a service interval for the device based at least upon the comparison of the one or more data points and the reliability curve.

41. A computer program for determining a service interval from a plurality of service intervals comprising:

a computer readable medium configured to store machine executable code; and

a computer program stored on the medium, the program comprising executable routines for collecting one or more data points regarding a device from a plurality of data sources, calculating a service interval for each data source by at least comparing the one or more data points from the data sources and at least one associated reliability curve, and selecting an optimal service interval from the plurality of service intervals.

42. A computer program for determining service intervals for a plurality of devices comprising:

a computer readable medium configured to store machine executable code; and

a computer program stored on the medium, the program comprising executable routines for collecting one or more data points regarding a plurality of devices, calculating a service interval for each device by at least comparing the one or more data points associated with the device and at least one associated reliability curve, and selecting an optimal service interval for one or more of the devices from the plurality of service intervals.

43. A device capable of determining its own service interval comprising:

means for collecting one or more data points regarding a device;

means for comparing the one or more data points to at least one associated reliability curve for a population of similar devices; and

means for calculating a service interval for the device based at least upon the comparison of the one or more data points and the reliability curve.

44. A device capable of determining a service interval from a plurality of service intervals comprising:

means for collecting one or more data points regarding a device from a plurality of data sources;

means for calculating a service interval for each data source by at least comparing the one or more data points from the data sources and at least one associated reliability curve; and

means for selecting an optimal service interval from the plurality of service intervals.

45. A device comprising:

an operator interface unit; and

a processor unit, wherein the processor unit is configured to collect one or more data points regarding a device, compare the one or more data points to at least one associated reliability curve for a population of similar devices, and calculate a service interval for the device based at least upon the comparison of the one or more data points and the reliability curve.

46. The device of claim 45, further comprising at least one of:

a run time meter;

a cycle counter;

a continuous system monitor; and

a self-test monitor.

47. The device of claim 45, wherein the processor is further configured to calculate a service interval based on at least one of:

the age of the device;
the repair history the device;
the workflow associated with the location of the device;
the traffic level associated with the location of the device;
the criticality associated with the device; and
the environment in which the device operates.

48. A device comprising:

an operator interface unit; and

a processor unit, wherein the processor unit is configured to collect one or more data points regarding a device from a plurality of data sources, calculate a service interval for each data source by at least comparing the one or more data points from the data sources and at least one associated reliability curve, and select an optimal service interval from the plurality of service intervals.

49. The device of claim 48, further comprising at least one of:

a run time meter;
a cycle counter;
a continuous system monitor; and
a self-test monitor.

50. The device of claim 48, wherein the processor is further configured to calculate a service interval based on at least one of:

the age of the device;

the repair history the device;
the workflow associated with the location of the device;
the traffic level associated with the location of the device;
the criticality associated with the device; and
the environment in which the device operates.